ASSIGNMENT 8

Textbook Assignment: "Target Detection and Weapons Control," chapter 10, "Alignment," chapter 11, and "Maintenance," chapter 12, pages 10-1 through 12-41.

8-1. What is the function of the Naval Tactical Data System (NTDS)?

1. To provide raw target information to the ship's fire control systems
2. To provide raw target information to other ships
3. To process target data for use by weapon systems and other ships
4. To turn digital target data into raw target data for use by weapon systems

8-2. Which of the following tactical data does NOT describe the tactical picture supplied by NTDS?

1. Real time
2. Projection
3. Based on available sensor data
4. A correlation of sensor data

8-3. In addition to range and bearing, what other target information is supplied by a three-coordinate radar?

1. Speed
2. Elevation angle and IFF
3. IFF only
4. Target angle

8-4. What is the function of ECCM in a radar unit?

1. To jam enemy sensors
2. To deceive enemy missiles
3. To mask the location of the ship
4. To counter the effects of jamming

8-5. What type of unit is used to detect and identify targets by their electronic emissions?

1. ASCM
2. ECCM
3. ESM
4. IFF

8-6. Which of the following data is required to determine a target's range using ESM?

1. A series of target readings
2. A reading of the magnitude of the detected signal
3. A source suggestion supplied by the equipment
4. A vector by a second platform equipped with ESM equipment

8-7. Which of the following target engagement actions is NOT a function of the WCS?

1. Processing raw target data for target engagements
2. Controlling target engagements
3. Scheduling target engagements
4. Assessing target engagements

8-8. What weapon system component assigns a threat priority to targets?

1. WCS
2. NTDS
3. IFF
4. ECCM

8-9. What system allows all or parts of a weapon engagement to be executed automatically?

1. WDS
2. NTDS
3. ESM
4. ECCM

8-10. What WDS function allows for the automatic engagement of targets approaching from a specified direction?

1. Custerhorn
2. Auto-Engage
3. Priority response
4. QR zones

8-11. Which of the following orders is NOT an element of a gun fire control solution?

1. Train orders
2. Elevation orders
3. Parallax orders
4. Fuze orders

8-12. What target information does a fire control system's radar and director provide to the computer?

1. Range, bearing, and elevation
2. Range and bearing only
3. Range, bearing and IFF
4. Range, bearing, and speed

8-13. What input does a stable element provide to the fire control computer?

1. A stable vertical reference
2. A stable horizontal reference
3. Own ship's course data
4. A stable central reference

8-14. What effect does the parallax correction account for in the control solution?

1. Having a gun and the director in the same location
2. Firing from a constantly moving platform
3. Having the gun in a dIFFerent location than the director
4. The effects of interior ballistics on gun performance

8-15. Which of the following terms describes the speed of a projectile at the instant it leaves the bore of a gun?

1. Interior ballistics
2. Ballistics speed
3. Initial velocity
4. Initial ballistics travel

8-16. What effect does bore enlargement due to repeated firing of a gun have on the ballistic solution?

1. It increases initial velocity
2. It decreases initial velocity
3. It increases ballistic speed
4. It decreases ballistic speed

8-17. What is the function of rifling in a gun barrel?

1. To provide a seal to prevent propellent gases from leaking past the projectile
2. To prevent bore erosion
3. To impart a stabilizing spin to projectiles when they are fired
4. To stabilize the projectile in the bore of the gun when it is fired

8-18. Which of the following environmental factors is NOT included in exterior ballistics?

1. Air density
2. Bore erosion
3. Gravity
4. Drift

8-19. What environmental factor determines the amount of resistance a projectile Will experience while in flight?

1. Air temperature
2. Air density
3. Barometric pressure
4. Wind

8-20. What are the two components of true wind?

1. Range wind and cross wind
2. Range wind and drift
3. Drift and ballistic wind
4. Ballistic wind and range wind

8-21. In what direction do gun projectiles tend to drift?

1. With the ballistic wind
2. Against the ballistic wind
3. In the same direction as the gun's rifling twists
4. In the direction of the cross wind

8-22. What reference line is used to determine the present location of the target?

1. Line of sight
2. Line of fire
3. Sight angle
4. Sight deflection

8-23. In the fire control problem, what reference line represents the difference between the line of fire and the line of sight?

1. Sight deflection
2. Sight angle
3. Drift
4. Parallax

8-24. What feature allows AEGIS to rapidly detect system failures?

1. Conveniently located test points and jumper locations
2. Built-in test
3. Fault alarms
4. Built-in gauges

8-25. What element of the AEGIS system performs automatic fault detection and system reconfiguration?

1. ACTS
2. ADS
3. C&D
4. ORTS

8-26. What is the purpose of the doctrine statements used in the AEGIS system?

1. To define automatic actions
2. To sequence target engagements
3. To restrict access to weapon firing controls
4. To provide computerized training for operators

8-27. Which of the following is NOT a function of the AN/SPY-1 radar system?

1. To provide midcourse guidance for standard missiles
2. To search for targets
3. To track targets
4. To control air engagements

8-28. Which of the following AEGIS subsystems is used to control the AEGIS mission?

1. ACTS
2. C&D
3. ORTS
4. WCS

8-29. Which of the following AEGIS subsystems acts as an interface between C&D and the FCS?

1. ACTS
2. ADS
3. ORTS
4. WCS

8-30. Which of the following AEGIS subsystems provides training for system operators?

1. ACTS
2. ADS
3. ORTS
4. WCS

8-31. What components of the Mk 34 GWS converts the ballistic solution into gun orders?

1. SDC
2. GMP
3. GC
4. CDC

8-32. From what station in the Mk 34 GWS should an operator manually select the ammunition type?

1. GC
2. GCC
3. GMP
4. SDC

8-33. What is the function of the velocimeter of the Mk 34 GWS?

1. To dampen the train and elevation movements of the gun mount
2. To accurately determine target speed
3. To update projectile initial velocity
4. To allow all system components to track at the same rate

8-34. Which of the following capabilities is NOT currently available with the Mk 86 FCS?

1. SM-1 missile engagements
2. SM-2 missile engagements
3. Gun engagements with surface targets using the 5"/54 Mk 45 gun
4. Gun engagements with air targets using the Mk 75 gun

8-35. From what position in the Mk 86 FCS is radar tracking of a target initiated?

1. WCC
2. COC
3. I/O console
4. Mk 113 control console

8-36. From what position in the Mk 86 FCS is ammunition selection entered?

1. WCC
2. COC
3. I/O console
4. Mk 67 control console

8-37. From what position in the Mk 86 FCS do operators run a system diagnosis?

1. WCC
2. COC
3. I/O console
4. Mk 67 control

8-38. The forward TV sight is mounted in what location on the Mk 86 FCS?

1. On the AN/SPA-9A antenna
2. On the AN/SPG-60 antenna
3. On the optical sight gimbals
4. On the data/video unit

8-39. The gun line-of-fire is determined in what device in the Mk 86?

1. In the AN/SPR-9A
2. In the MTRR
3. In the AN/UYK-7
4. In the WCC

8-40. Which of the following systems can be controlled by the Mk 92 FCS?

1. The Mk 75 gun only
2. The Mk 13 Mod 4 GMLS only
3. The Mk 75 gun and the MIC 13 Mod 4 GMLS
4. Weapons Alpha

8-41. What unit of the Mk 92 FCS provides long range tracking for the systems?

1. CAS tracking antenna
2. CAS search antenna
3. STIR
4. CAS WCC

8-42. What unit of the Mk 92 FCS provides IFF interrogation?

1. CAS tracking antema
2 CAS search antenna
3. STIR
4. CAS WCC

8-43. Gun mount and/or missile launcher position orders originate from what location in the Mk 92 FCS?

1. The CAS WCC
2. The WCP
3. The DEAC
4. The STIR WCC

8-44. From what console in the Mk 92 FCS can track data be entered in casualty mode operation?

1. The WCO
2. The DEAC
3. The WCP
4. The CAS WCC

8-45. From what major area(s) do/does system maintenance tests check equipment?

1. Alignment only
2. Electrical operability only
3. Gyro inputs
4. Alignment and electrical operability requirements

8-46. What is the primary purpose of the DSOT?

1. To assess missile system readiness in its normal mode of operation only
2. To assess gun systems readiness in its normal mode of operation only
3. To assess missile and gun systems readiness in their normal mode of operation
4. To assess missile and gun systems readiness in their causality mode of operation

8-47. A training missile consists of what major subassemblies?

1. Training missile shape only
2. Guided missile simulator only
3. Training missile and guided missile simulator
4. Tactical missile and guidance system

8-48. GMTRs are carried aboard combatant ships for what purpose?

1. Handling training
2. Damage control
3. Display only
4. Training and testing

8-49. When is combat system alignment established?

1. When the ship is commissioned
2. As the ship is constructed
3. Periodically by the crew while the ship is in commission
4. After the ship is constructed but before it is commissioned

8-50. What is the job of the ship’s crew in regard to combat system alignment?

1. To establish alignment only
2. To verify alignment only
3. To establish and verify alignment
4. To verify and correct alignment as necessary

8-51. What is the first reference plane established in a combat system?

1. Centerline
2. MRP
3. Ship’s base plane
4. WCRP

8-52. What reference plane is used to establish train zero?

1. The WCRP
2. The SBP
3. The MRP
4. The CRP

8-53. What reference plane is designated as the alignment reference?

1. The WCRP
2. The SBP
3. The MRP
4. The CRP

8-54. For combat system elements that are equipped with alignment telescopes, what type of alignment reference marks are established?

1. Centerline reference marks
2. Offset centerline reference marks
3. Bench marks
4. Telescopic reference marks

8-55. What type of checks is used as a ready reference to verify gun system alignment?

1. Bench mark readings
2. Star checks
3. Theodolite
4. Tram checks

8-56. A tram reading determines system alignment in what manner?

1. By placing a known distance between two fixed points
2. By measuring the distance between two known points
3. By establishing the distance between two fixed points
4. By reading train and elevation angles while at known angles to the WCRP

8-57. Tram reading are taken by moving the gun in both directions several times with the results averaged for what reason?

1. To account for play in the indicator dials
2. To detect lost motion in the gear trains
3. To allow for wear in the air drive motor
4. To allow for roller path equalizer input

8-58. How should you train the gun before taking elevation tram readings?

1. Move the gun to zero degrees in train
2. Move the gun to 2000 minutes in elevation
3. Move the gun to 90 degrees from the bearing of the high point
4. Move the gun to 180 degrees from the bearing of the high point

8-59. What is the function of gun mount star checks?

1. To align the director to a bench mark
2. To verify alignment of the gun mount to the reference tram readings
3. To establish parallelism between the gun and the WCRP
4. To verify parallelism between the gun and the WCRP

8-60. What information source is used as the baseline for weapon system alignment verification?

1. The SCLSIS log
2. The last star checks
3. The last alignment report
4. OP-762

8-61. What section of the smooth log is used to determine spare parts available for your system?

1. B
2. C
3. F
4. J

8-62. What type of preventive maintenance procedures are NOT found on MRCs?

1. Lubrication procedures
2. Equipment material condition
3. Fluid level checks
4. Inspection of some adjustments

8-63. When, if ever, is it appropriate to lubricate mechanical equipment more often than is called for on the MRC?

1. During heavy operational conditions
2. During equipment layup
3. During prefire checks
4. Never

8-64. What problem(s), if any, can occur due to dirt and dried hydraulic fluid being allowed to collect on your equipment?

1. Mechanical adjustments can slip
2. Equipment damage can go undetected
3. Hydraulic leaks can go undetected
4. None

8-65. Which of the following is NOT a cause of gun mount mechanical equipment misalignment?

1. Wear
2. Slippage
3. Dirt and dried hydraulic fluid accumulations
4. Twisting of the ship's hull

8-66. What, if anything, is the difference between a maintenance man and a maintenance man's helper?

1. A maintenance man knows how to use all the tools available to him, such as MRCs, technical manuals, and common sense; a maintenance man's helper can only perform minimum skill tasks, such as PMS
2. A maintenance man is senior in rank to a maintenance man's helper
3. A maintenance man has been in the Navy longer than a maintenance man's helper
4. Nothing

8-67. Which of the following statements represents the ideal situation for the identification and repair of gun mount casualties?

1. To have the gun quit working during a firing operation then find and repair the casualty
2. To discover a problem while performing prefire checks then find and repair the casualty
3. To discover the problem while performing routine preventive maintenance then find and repair the casualty
4. To routinely replace gun mount components before they show any sign of wear of defect

8-68. which of the following personal attributes should improve your ability to identify and repair gun mount/GMLS casualties as they occur?

1. A good understanding of PMS
2. A thorough understanding of how your gun mount/GMLS works
3. A thorough understanding of PMS
4. A thorough knowledge of mDS

8-69. Which of the following is a good indication that you have a problem with your preventive maintenance habits?

1. You routinely find casualties of potential casualties while performing preventive maintenance
2. You routinely experience casualties while performing preventive maintenance
3. You routinely experience casualties while conducting firing exercises
4. You rarely experience casualties while firing the gun

8-70. Which of the following information is crucial to scheduling gun mount overhaul work?

1. Preventive maintenance records
2. The gun system supply log
3. Gun casualty documentation
4. The verbal recommendations of the division officer

8-71. Which of the following phrases best describes viscosity?

1. The number of specified uses for a certain lubricant
2. The prescribed temperature range for a certain lubricant
3. A lubricant with additives
4. The thickness of a lubricant

8-72. what term describes a lubricant's reaction to temperature variations?

1. Viscosity
2. Viscosity index
3. Temperature index
4. Temperature stability

8-73. What term describes the lowest temperature characteristic of a lubricant?

1. Flash point
2. Oiliness
3. Flame point
4. Flow point

8-74. Which of the following signs indicates the deterioration of a lubricant?

1. The inspection date stamped on the container has been reached or passed
2. Oil puddles form on the surface of grease after being stored for a while
3. The lubricant changes color
4. The lubricant has been exposed to open air for more than 14 days

8-75. In addition to lubrication, what other function(s) is/are performed through the use of lubricants?

1. Corrosion prevention only
2. Corrosion prevention and oxidant removal
3. Seal out contamination
4. Collection and removal of oxidants from the system only